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ABSTRACT

The purpose of this four phase quasi-experimental study was to determine if putting selected books into a display controlled by a theme in a school media center would: (1) increase the circulation of the display books; (2) cause an increase in the circulation of the entire collection; and (3) encourage children to read a type of book they did not normally choose to read. The sample of 100 tagged books was divided into two equal groups, each with 17 fiction and 33 nonfiction books, and each group fitting into a specific theme. Circulation of the tagged books was recorded during the pre-experimental period of 4 weeks, the two successive experimental periods of 4 weeks each, and a post-experimental period of 3 weeks. Each group of books had a turn at being the experimental group in a display while the other group remained in the collection as a control. Circulation data for the entire collection were recorded for the four phases of the study. A questionnaire inserted in the display books and returned with the books was used to determine if the books were read by the user, if liked, if different from the kind usually read, and why the book was selected. A copy of the questionnaire, 12 references, and a six-item annotated bibliography on the library display are included. (Author/MAB)

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AN EXPLORATION OF THE VALUE OF CREATING BOOK DISPLAYS IN A SCHOOL MEDIA CENTER, FALL, 1990

A Master's Research Paper submitted to the
Kent State University School of Library Science
in partial fulfillment of the requirements
for the degree Master of Library Science

by

Phyllis Dalton

January, 1991

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An Exploration of the Value of Creating
Book Displays in a School Media Center

The purpose of this four phase quasi-experimental study was to determine if putting selected books into a display controlled by a theme, in a school media center would increase the circulation of the display books, cause an increase in the circulation of the entire collection and encourage children to read a type of book they did not normally choose to read. The sample of 100 tagged books was divided into two equal groups each with seventeen fiction and thirty-three nonfiction books and each group fitting into a specific theme. Circulation of the tagged books was recorded during the pre-experimental period of four weeks, the two successive experimental periods of four weeks each and a post-experimental period of three weeks. Each group of books had a turn at being the experimental group in a display while the other group remained in the collection as a control. Circulation data for the entire collection was recorded for the four phases of the study. A questionnaire inserted in the display books and returned with the books was used to determine if the books were read by the user, if liked, if different from the kind usually read, and why the book was selected.

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Introduction

People responsible for marketing goods and services, have known for a long time that whatever is displayed in an attractive way and in a prime location has a much greater chance of being sold then something placed on a shelf and lost in a crowd of other similar items, even if the potential consumer had no intention of buying that specific item. Several people involved with libraries have conducted studies on increasing the circulation of books by using displays. Herbert Goldhor in 1969 and 1970 placed books in a prime display location in Champaign Public Library to see if this would affect their circulation by encouraging browsing,[1] and repeated the study in Jamaica in 1978/79.[2] William Aguilar in 1981/82 duplicated Goldhor's studies in an academic library in Champaign, Illinois.[2] In 1983/84, Sharon Baker did a study similar to Goldhor's but used three locations instead of two; a prime display area, a nonprime display area and books on shelves[3] and in 1987 Sarah Long

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[1]Herbert Goldhor, "The Effect of Prime Display Location on Public Library Circulation of Selected Adult Titles," Library Quarterly 42 (October 1972) :371-389.

[2]William Aguilar, The Influence of a Book Display on Circulation in a Two Year College Library, (University of Illinois Typescript, 1982), microfiche.

[3]Sharon L. Baker, "The Display Phenomenon : An Exploration into Factors Causing the Increased Circulation of Displayed Books," The Library Quarterly 56 (July, 1986) :237-257.

displayed books face front as opposed to book spines showing.[4] The purposes of all of these studies were to discover if placing books on display increased the circulation of those books within public or academic libraries and if so, why.

Many books and articles have been written about the positive effects of displays on all ages of patrons and in different types of libraries, on getting them interested in the library and its books. Some have concerned themselves with book displays in the school media center. Madeline Hoss, the head librarian in a university high school, stated that the best way to fight illiteracy was to "lead students into the library and make them want to read".[5] Bernice E. Cullinan expressed that the purpose of a children's library was to encourage children to read, read a wide variety of material and enjoy reading.[6] Linda Campbell Franklin stated that an imaginative, well presented display was one way to entice the reader into the library, to encourage reading and to express concepts thus broadening the education and interests of the student population.[7] Dorothy M. Broderick further contributed to the idea of displays expressing

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[4]Sarah P.Long, "The Effect of a Face Front Book Display in a Public Library," North Carolina Libraries 45 (Fall, 1987) :150-164.

[5]Madeline Hoss, "Low Visibility", School Library Journal (March, 1990) :110.

[6]Bernice E. Cullinan, Literature and the Child, 2nd ed. (San Diego : Harcourt Brace Jananovich, Inc., 1989), 6-7.

[7]Linda Campbell Franklin, Library Display Ideas, (Jefferson, NC : McFarland & Co., 1980), v.

concepts by stating that displays can serve to broaden children's concepts of the world and help them understand that there are different ways of looking at things. She claimed that a display makes a statement about what we value so it is essential to think through what it is we are trying to accomplish and act accordingly.[8] Marion Edsall stated that a display in a media center is a kind of advertising to lure students into the library but that these should be "teaching displays" and not "empty calorie".[9]

The activity of setting up book displays is time consuming, uses valuable space and often valuable resources. These writers have stated that a display is an excellent way to bring readers into the library, to encourage reading and to broaden students' interests and concepts. They were librarians speaking from experience but empirical evidence would add strength to their claims.

Literature Review

Much has been written about setting up displays in libraries and most of this has been practical how to and why books and articles. These are excellent source materials for anyone planning to set up a display in their library for ideas, necessary resources, and principles of design and theme for various age groups and types of libraries. They

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[8]Dorothy M. Broderick, Library Work with Children, (New York : Wilson Co., 1977), 95.

[9]Marian Edsall, Practical P.R. for School Library Media Centers, (New York : Neal-Schuman Inc.,1984), 131.

have excellent justifications for displays : increased circulation, acquainting patrons with what is available, stimulating public interest and/or raising the profile of the library in the community as an information source. They have all made statements about the reasons why displays are important in the library but they have very little empirical evidence to add strength to their statements. Some of these books have been listed in an annotated bibliography in Appendix A as a resource for ideas for setting up a display.

As mentioned in the introduction, there are several people who have done studies on the effects of displays in various types of libraries. Herbert Goldhor has conducted at least two studies with displays in libraries. From November/69 to October/70, he did a study in the public libraries of Champaign and Urbana, Illinois. The purpose of the study was to determine if placing adult books in a prime display location would increase their circulation. The circulation among adults, both students and nonstudents, of 110 carefully chosen titles, both fiction and nonfiction, was recorded in these two medium sized public libraries over two six month periods using a four-cell experimental design. In the first pre-experimental phase there was no significant difference between the two libraries. In the second phase, the Champaign Public Library placed these titles on display and experienced more then a doubling of their circulation. Analysis of the experimental data and the responses of 64%

of the borrowers to a questionnaire, indicated that placing the books on display increased their circulation especially among nonstudent women borrowing fiction and that browsing was the method most used to select books. It was suggested at the end of the study that more studies were needed to support the hypothesis using improved methodology. Even though the circulation increased significantly for the experimental group of books in Champaign, the overall circulation for Urbana increased 14% from phase one to phase two and for Champaign, total circulation increased only 4%.[10] The displays in Champaign did not increase overall circulation leading one to the speculation that a display does not necessarily cause people to take out more books.

William Aguilar in 1981/82 based a study of the influence of book displays on circulation in an academic library on Goldhor's studies. The study was conducted at Parkland College in Champaign, Illinois. He hypothesized that books prominently displayed would have a significantly higher rate of circulation then books not on display because any device which facilitates browsing would result in increased circulation. Using a random sample of 100 books divided into two equal randomly assigned groups, the control group and the experimental group, Aguilar used a variation of the pretest-posttest control group design to collect his

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[10]Goldhor, "Effect of Prime Display," 371-389.

data. It could be illustrated as:

		phase 1	phase 2
Group A	R O	X O	O
Group B	R O	O	X O

with groups A and B being the two different groups of books, O being the collection of circulation data and X being the treatment of being put on display for a two month period. In the first phase patrons taking out display books were contacted by phone and given a brief verbal questionnaire with an 82% user response rate and in the second phase, the questionnaire was mailed to patrons taking out display books with a 74% user response rate. The questionnaire was mailed as classes were over and the majority of students had left. The purpose of the phone and mailed questionnaires was to determine who borrowed the books, if the books had been read and why they had been borrowed. The results of the study indicated a significant correlation between displayed books and an increase in their circulation and the questionnaires indicated that the display brought these books to the user's attention. There was no indication that the total circulation for the library increased significantly during the experimental periods.[11]

In the years 1983/84, Sharon Baker did a study exploring the factors which cause the increased circulation of displayed books in two small public libraries in Illinois. Her first hypothesis was that fiction books placed in a prime

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[11]Aguilar, Influence of a Book Display.

display location would circulate significantly more then their counterparts on regular shelves or in a nonprime display location because of their physical accessibility and visibility to browsers. This was very similar to Goldhor's study in Illinois. Her second hypothesis was that fiction books marked "recommended" would circulate more then nonrecommended in any location because recommendations would tend to narrow a browser's choice thus overcoming the effects of information overload. Two parallel experiments were conducted simultaneously in both libraries using the same variation of a pretest-posttest control group design that Aguilar used with each period lasting three months. The sample for the first hypothesis consisted of three groups of 75 fiction books each, which were considered to be representative of the collection in regards to seven different variables including size, physical condition, date of publication, etc. The sample for the second hypothesis consisted of two groups of 38 each randomly chosen from the other three groups.

In the first experimental period one group of books was placed near the circulation desk, one group was placed in an area not easily accessible or visible, and one group was left on the shelves. The 38 "recommended" books in each area were marked with a red dot and a large sign informed patrons that these books were recommended. In the second experimental period the prime display books became the nonprime display books and vice versa and the not recommended books became the recommended books and vice versa. A telephone interview

of patrons checking out books from all three groups was conducted only during the first experimental period to determine why they selected the titles they did. The method was too time consuming for the staff to repeat it in the second period.

The results of Baker's study indicated that fiction books in a prime display area circulated significantly more then books in either a nondisplay area or on regular shelves and these results were the same even when the location of the books was exchanged in the second experimental period. The telephone interview confirmed the notion that browsers were the primary users of displays. For the second hypothesis the larger library had a significant difference in the circulation of the "recommended" books over the nonrecommended books but the smaller library did not so this hypothesis was rejected with the suggestion that recommendations may only be a significant factor in libraries with larger collections because of the possibility of greater information overload for browsers. The display did not increase the total library circulation.[12]

In the fall of 1987 an article was published describing a study done by Sarah Long in a public library in North Carolina. Her study was similar to and based on studies by the people previously mentioned in this paper but with a consumer marketing emphasis. She applied research done in the marketing field both in retail stores and book stores to marketing which could be done in the library by

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[12]Baker, "The Display Phenomenon," 237-257.

displaying library materials in an attractive fashion paying attention to location, layout, shelf position etc. Her hypothesis was that books displayed face front would circulate more then books with only their spines showing. Long used a 4-cell pretest-posttest pattern with each time period lasting two months. The sample consisted of 300 books randomly picked from Adult Current Fiction and randomly assigned to the control group which would be displayed spine out and the experimental group which would be displayed face front. These books were throughout the library rather then in a prime location. Circulation statistics for both groups in the pretest period were not significantly different but during the experimental period the circulation for the experimental group showed a significant increase. Her conclusion was that marketing skills should be applied to the library to attract patron attention but there was no mention that it increased overall circulation.[13]

Studies done in libraries serving children were not found other then one done in a high school in the U.K. and published in 1979. A brief summary of this study discussed the impact of a library display on interest in and enthusiasm for the library, increased pupil use and staff participation, and its value in uncovering a wealth of historical material in the locality.[14]

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[13]Long, "Effect of Face Front Book Display," 150-164.

[14]R.J.I.Clare, "The Snowball Effect : An Account of a School Library Exhibition," School Librarian 27 (Sept., 1979) :224-228 Lisa Annotation.

Experimental studies conducted with adults in public libraries have reported an increase in the circulation of displayed books. The study done in the U.K. high school reported that a display increased interest and enthusiasm for the library. Teachers and librarians believe that a display is a means of bringing students into a library and encouraging them to read but that in a school the display must also "teach", broaden interests and concepts.

It was the purpose of this study to discover if results obtained in adult public libraries on the circulation of displayed books could be duplicated in a children's library. If this occurred, then a librarian could use a display to introduce patrons to books which have a low or nonexistent circulation rate. If a display caused an increase in the overall circulation, an assumption could be made that a display can be used to encourage more reading. The literature has stated that displays in a school media center should accomplish more than this so the displays were created around themes to discover if a display would encourage readers to choose types of books they were not in the habit of reading.

Research Hypotheses/Objective

The purpose of this study was to test hypotheses similar to those propounded by the researchers discussed in the literature review. The significant difference was the type of library and the age of the patrons. Previous studies were done in public libraries with adults and this study was done in a school media center with children. This study had two main hypotheses:

Hypothesis I

Children's books on display will be chosen more often then comparable books on the shelves in a school media center.

Hypothesis II

A display will cause an increase in the over all circulation of the collection of children's books in a school media center.

A further objective of the study was to explore the possibility of using a display to encourage children to select books which were different from the type they normally selected.

Definitions

It is necessary to clarify some of the terms used in the study.

Circulation is a process in which library users sign out and remove items from the library for a specified period of time and then return them to be replaced into the collection.

A display, as used in this study, was made up of books which had been removed from their location on the shelves

and arranged either face forward or spine out in a conspicuous location and in a manner which drew attention to them.

The term "books that were different" was based on assumptions that children recognize differences between types of books and tend to favor certain types over others when they select books. Types could include subject, content, format and genre. It is difficult to make a clear distinction between different and not different when applied to something as complex as a book. This makes it impossible to justify using the statement as part of an hypothesis.

Methodology

A four phase quasi-experimental study extending over four months, and using a non random sample of two groups of books with grades three through five students was used to test the two hypotheses. For all four phases, circulation of the sample books was recorded manually (as this information was not obtainable from the circulation computer) and circulation of the entire collection was obtained from the computer. A questionnaire was used to supply information to further support the first hypothesis and to satisfy the objective.

Sample

Barrington School Media Center was chosen as the site of the experiment because the researcher was a volunteer in the library, thus making it available and convenient. It was in a fifty year old school building with a student population of approximately 580 kindergarten through grade

five students.

STUDENTS:

The study did not deliberately exclude kindergarten through grade two students, but the level of difficulty of the books used, was geared towards the approximately 384 third through fifth grade students. These children generally came from middle to upper class families who valued education and reading. The majority of the students had spent three to five years in a school with a literature based curriculum. In a literature based curriculum, textbooks and basal readers have been replaced with literature kept in the classroom or in the media center and books and reading receive a very strong emphasis. The students were not accustomed to book displays based on themes in the media center as the librarian had not had time to set them up.

BOOKS:

The sample of books used in this study came from a collection of approximately 17,000 books. The circulation period for the books was two weeks as each class had a pre-arranged time period in the library every two weeks. Taking out and returning books was not limited to these visits.

Two sets of 50 books each were chosen to create two distinct groups, each group representing a different theme. The displays were created around themes to attract attention and arouse interest. The first group which was displayed in October dealt with activities which could be engaged in during leisure time such as sports, crafts, hobbies, cooking,

simple science experiments, magic tricks, etc. The 33 non-fiction books were "how-to" books and the 17 fiction were stories about children involved in activities such as sports, babysitting and rescuing endangered wildlife. This topic was chosen because it was the researcher's experience that children of this age group enjoy engaging in these kinds of activities and teachers are not as likely to use these books in the curriculum. These books are called the Oct. books throughout the study as they were on display in October.

The second group of 50 books had the common theme of children in many different countries of the world. The 33 non-fiction books included books about contemporary children; their homes, national costumes, fairytales and crafts. The 17 fiction books were stories about children from other countries. Again this was a topic the researcher felt children would be interested in and one which is important in a world becoming smaller due to present communication and transportation systems. This could have been an area teachers would choose books from but since only one of several books from each country was chosen for the display, others were available to teachers or students if they were needed for school projects. This group will be referred to as the Nov. books as they were on display in November.

Because the books were chosen for specific themes, the randomness of the sample was of lower priority though not disregarded. Some semblance of randomness was achieved by choosing books from throughout the collection, across the

different subject classifications in non-fiction and across the letters in the alphabet as the fiction books were arranged by the first three letters in the author's last name.

After the books were selected to fit into the themes, physical characteristics were recorded so comparisons of the two groups could be made. Attractiveness (invitation to be selected) to potential users could affect their being selected from a display. Attractiveness is a subjective judgement but two characteristics which are measurable and may affect attractiveness are the year of publication and the width of the spine.

Year of publication was recorded as older books tended to have poorer quality or nonexistent cover art. The date of publication of the books ranged from 1951 to 1989. Of the Oct. fiction books, 65% were published in the 1980's, compared to 59% of the Nov. books being published in the 1970's. The Nov. fiction books also had 4 books published in the 1950's compared to Oct.'s earliest fiction book being 1962. It was difficult to find recent books about children in other countries. The Nov. non-fiction books tended to be newer with 64% being published in the 1980's and 21% in the 70's as compared to 49% of the Oct. books published in the 1980's and 42% in the 70's. Because of the nature of the topics, recency is of less importance when using books about leisure activities and this was reflected in what was available from the collection.

The width of the spine, from cover to cover, was measured,

as students could associate width with difficulty, again affecting the book's attractiveness. Fiction books, where it is assumed that the reader will read the entire book, could be more affected by this then non-fiction. The majority of Oct. fiction books (88%), were 1/2" to 3/4" in width with the other 12% being 1". The November books were of more varied widths with only 53% being 1/2" to 3/4", 18% being 1/4" and 29% being 1". The older fiction books about children from other countries were either 1/4" or 1" with newer books being 1/2" to 3/4". Non-fiction books tended to be thinner than the fiction with 70% of the Oct. books and 76% of the Nov. books being 1/4" wide. None of the books exceeded 1" in width. These comparisons have been illustrated in Table 1.

Table 1

Comparison of Books Used in Displays

Category	Oct. Fiction N=17	%	Oct. Non-fiction N=33	%	Nov. Fiction N=17	%	Nov. Non-fiction N=33	%
Publication Year								
1950-59	0	-	2	6%	4	23%	1	3%
1960-69	2	12%	1	3%	2	12%	4	12%
1970-79	4	23%	14	42%	10	59%	7	21%
1980-89	11	65%	16	49%	1	6%	21	64%
Width of Spine								
1/4"	0	-	23	70%	3	18%	25	76%
1/2"	4	23%	6	18%	6	35%	5	15%
3/4"	11	65%	4	12%	3	18%	2	6%
1"	2	12%	0	-	5	29%	1	3%

The researcher deliberately chose books for both groups which did not have high circulation rates to lessen the chances of the books being chosen from the display because they were "popular" books. A book's "popularity" could be estimated by looking at the dates and number of times it had been manually stamped (the computer system had been operational for only a short time), and by the researcher's knowledge of which books were widely read by children in this age group. The estimated circulation for the majority of books tended to be low and lower for the Nov. books than for the Oct. books. Nine of the Nov. non-fiction had never been recorded as having circulated.

In October the Oct. books were on display and the Nov. books were in their normal locations in the collection as a control group. In November the Nov. books were on display while the Oct. books were in their normal locations in the collection as a control group.

Data Collection

Three methods of data collection were used. Circulation statistics for the experimental books for all four phases of the study were recorded manually by the parent volunteers to test Hypothesis I. Circulation statistics for the entire collection were taken from the computer to test Hypothesis II. Information was obtained from the questionnaire placed into the display books to further support Hypothesis I and to attempt to answer the question of displays encouraging children to choose different types of books.

Circulation statistics for the 100 sample books were recorded by the parent volunteers who were responsible for the circulation desk. It was not possible to get these statistics from the circulation computer. Cards with the title of the book, had been inserted into pockets glued onto the inside back cover of each book. If the books had circulated anytime during the four phases of the study, the volunteers marked the cards with colored "S"es for student each time the book went out--blue for September, red for October, black for November, and green for December. Because the cards had the titles of the books on them, it was possible for the researcher to collect the cards and tabulate how often and in which month each of the sample books had circulated.

Circulation statistics for the entire collection could only be recorded by each month. Fortunately this coincided with the four phases of the study. The statistics included books taken out by students and teachers as there was no way to separate these figures.

A brief, easy to read, anonymous questionnaire was inserted in the back of each book which went out from the displays during the two experimental periods. Using six structured questions, the questionnaire obtained information about the student's gender and grade, whether or not the book was read and liked, if it was a different type of book than the student usually read and if it would be picked again. An open ended question asked why the book was picked. This allowed students to write what they felt was the best answer.

A structured question may have left out some of the possibilities making it difficult for children to choose the "best" one if their reason was not included. It was also possible that the students may have understood the given reasons differently from what was intended by the researcher. The title of the book was asked, to enable the researcher to identify the book as fiction or non-fiction. A copy of the questionnaire is in Appendix B.

The questionnaire was field tested with two separate classes two weeks before the experimental period began. One class had 22 third grade students with 18 boys, and the other had 25 fourth grade students with 17 girls. When they entered the library for a scheduled class, they were asked to keep one of the books they were returning and had read. The books were ones they had chosen from the collection. They were asked to fill out the questionnaire on the book they had with them and when the questionnaires were completed, the students were given stickers as a thank-you.

It was considered unnecessary to make any modifications to the questionnaire after the field test. Field test data was tabulated and retained to be compared to data obtained from display questionnaires. Field test data was representative of borrowing practices of books taken from the entire collection under normal conditions.

Procedure and Design

This four-phase study extending from September through December, was divided into three four-week periods and one

three-week period (December). Before the study began, the 100 books in the sample were chosen and the questionnaire was developed and field tested. During the first phase all of the sample books were in their normal positions in the collection. During the second phase 50 of the books were put on display and the other 50 acted as a control group in their normal positions. During the third phase the other 50 books were put on display and the first group were the control. During the fourth phase all books were once more in their normal positions. Circulation statistics were collected for all 100 books during all four phases. Total circulation for the entire collection was recorded on the computer system. Questionnaires went out with display books only during the two experimental phases.

PRE-STUDY PHASE

Before the beginning of the school term, 34 fiction and 66 non-fiction books were selected from throughout the collection with the idea of being as random as possible. Selection restrictions included fitting one of the two themes, avoiding books likely to be used by teachers and avoiding books popular with students. The sample books for the October display on leisure activities, were tagged with small red circular labels placed next to the bar codes on their exterior back covers. Identical blue labels were put on the books chosen for the theme of children from other countries, indicating that these were the books for the November display. The label placed by the bar code was readily visible to the

parent volunteers who checked out the books using the bar code. Information about each book was recorded in a notebook including the title, author, category (Oct., Nov., fiction or non-fiction), call number, publication date, spine width, and number of times stamped.

The card with the title of the book, which would be used for circulation statistics, was placed in the pocket on the interior back cover. These books were then returned to their normal positions in the collection.

The questionnaire was duplicated and field tested with the two previously mentioned classes.

PRE-EXPERIMENTAL PHASE - SEPTEMBER

In this phase, all of the sample books remained in their normal positions unless taken out by a student or a teacher. Twenty-six different parent volunteers--a different one every half day over a period of two weeks--were responsible for the circulation desk. Verbal instructions from either the librarian or the researcher and written instructions left in an accessible place on the circulation desk, informed the volunteers of the purpose of the research and the procedures they were to follow. If a book with a red or blue label was checked out by a student, the volunteer was to put an "S" for student with blue ink on the card in the pocket. The blue ink would indicate to the researcher that this book had circulated in September.

FIRST EXPERIMENTAL PHASE - OCTOBER

The first display was set up in a central area of the library close to the circulation desk on a small set of

shelves. A large colorful mobile suspended from the ceiling with the message "SO MANY THINGS TO DO" in bold black and orange letters and some examples of paper crafts, invited students to take out the books about leisure activities. A large, freestanding, colorful cardboard Garfield holding a recipe for lasagna and with a speech balloon informing students "that these books would show them how", further drew attention to the books on the shelves which were either spine out or face forward. A questionnaire was paper-clipped to the last page of each book in the display.

The volunteers were now asked to put an "S" with red ink on the cards of all blue or red labeled books which circulated to students. They were to make sure that each Oct. book that went out from the display had a questionnaire and when the book was returned to remind the students to place the completed questionnaire in a labeled box on the circulation desk. The questionnaire instructed students to help themselves to a sticker from the sticker box under the questionnaire box. If Oct. books were returned during October, the volunteers were to place a new questionnaire into the back of the book and put the book back into the display. Some students expressed a desire for stickers without having read a display book so the volunteers were instructed to give any child making this request, a questionnaire to fill out on any book they had read thus entitling them to receive a sticker. These questionnaires were discarded but it was hoped that this would prevent students from taking books from the display only to

receive stickers.

SECOND EXPERIMENTAL PHASE - NOVEMBER

The Oct. books were restored to their normal positions in the collection and the Nov. books were put into the display area. This display had a large map of the world made of Geographic Magazine photographs of children from many different countries of the world. The message was "VISIT THE CHILDREN OF THE WORLD BY BOOK" and a small airplane made with a book flew over the top. The area covered by this message and map, though more solid, was identical in size to the area covered by the mobile in the first display. The letters used for the words were also black but this time on yellow. Garfield, without his previous speech balloon, remained by the shelf.

The volunteers were asked to use black ink for the "S" which was put on the cards of all red and blue labeled books which circulated to students during this phase. Questionnaires had been placed into all of the Nov. display books and the volunteers were once again to remind students to place completed questionnaires in the box when Nov. books were returned and to collect their sticker. As long as this phase continued, the returned Nov. books were to receive new questionnaires and be replaced into the display.

POST EXPERIMENTAL PHASE - DECEMBER

All of the labeled books were returned to their normal positions in the collection. If they circulated to students during this period, the volunteers were to mark their cards with a green "S". The volunteers were all given thank-you

notes for their cooperation and participation.

Throughout the study, the researcher went to the liorary on a regular basis to ascertain the condition of the display, the knowledge of the volunteers as to what they were to do, and to make appropriate corrections if all instructions were not being followed. Some of these corrections were: pulling display books from normal positions and placing them into the display, putting new questionnaires into returned books, and keeping track of which books were out. This record served as a double check for the "S"es on the cards making the data more reliable. At the end of this phase, all cards and labels were removed from the sample books and the "S"es were counted for each month.

Results

Circulation statistics for the 100 sample books were collected throughout the four periods of the study. The results have been tabulated in Table 2.

Table 2

Display Book Circulation Compared to Circulation of Non-Display Books

Book Group	Pre-Experimental (September) amount	mean	Experimental Period 1 (October) amount	mean	Experimental Period 2 (November) amount	mean	Post Experimental (December) amount	mean
Oct.	8	.16	11	.22	2	.04	5	.10
Nov.	3	.06	1	.02	30	.60	1	.02

During the September period all of the 100 books were on the shelves in their normal positions. The Oct. books had a higher average circulation than the Nov. books. The mean was determined by dividing the number of circulations for each period by 50--the number of books in the sample. This seemed to indicate that the two groups were not equivalent in their normal circulation and some adjustment would have to be made. The analysis of covariance is used with intact groups which may not be equivalent. It enables the researcher to take into account sources of variance due to accompanying variables thus reducing the possibility of error when the data is tested for significant differences.[15] In this situation the September circulation figures were used as the covariate. The ANCOVA procedure in the MINITAB statistical software program was used to adjust the means and determine if putting books on display in October and November made a significant difference in the books' circulation.

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[15]Kerlinger, Fred N., and Elazar J. Pedhazur, Multiple Regression in Behavioral Research, (New York : Holt, Rinehart and Winston, Inc., 1973), 266.

The results are illustrated in Table 3.

Table 3

Results of ANCOVA in Determining
Significance of Circulation Differences

State of Books	Means	Adjusted Means	F-Ratio	P-level
(Experimental Period 1-October)				
Display (Oct.)	.22	.21		
Non-display (Nov.)	.02	.03	7.29	.008
[covariate = September circulation: F=1.24]				
(Experimental Period 2-November)				
Display (Nov.)	.60	.62		
Non-display (Oct.)	.04	.02	32.37	.000
[covariate = September circulation: F=5.81]				
(Experimental Period-2 November)				
Display (Nov.)	.60	.64		
Non-display (Oct.)	.04	.002	33.68	.000
[covariate = average circulation for September & October: F=5.33]				
(Post Experimental Period - December)				
Non-display (Oct.)	.10	.09		
Non-display (Nov.)	.02	.02	2.05	ns
[covariate = September: F=2.47]				

For both the October and November experimental periods the F-Ratio showed a significant difference between the circulation of books on display and the books not on display. While more Oct. books circulated in both September (8) and October (11), a significantly higher number of Nov. books circulated in November (30). This is supported by the F-Ratios which were 7.29 for the Oct. books on display in October and 32.37 for the Nov. books on display in November. The Nov. book circulation in November was significantly greater even when adjusting for both September and October circulations (F=33.68). The F-Ratio was not significant for December indicating that circulation returned to normal levels when the books were no longer on display.

Circulation statistics for the entire collection were taken from the computer for all four periods. These have been tabulated in Table 4.

Table 4

Total Circulation of Materials
in Barrington School Media Center

Frequency	September (4 weeks)	October (4 weeks)	November (4 weeks)	December (3 weeks)
observed (O)	3993	4212	3967	3043
expected (E)	4057.33	4057.33	4057.33	3042.99
$(O-E)^2/E$	1.01997	5.89619	2.01105	0

$x^2 = 8.93$, df = 3, $P < .05$

A one-dimensional chi square (x^2) was used to determine if there was a significant difference between the circulation figures for each time period using the formula

$$x^2 = \sum \frac{(O-E)^2}{E}$$

where O = observed circulation which in this study was highest in October (4212/4 weeks), and lowest in November (3967/4 weeks). E = expected circulation--the circulation that could be expected if the variable of putting books on display did not affect circulation. Expected circulation was computed as 4/15 of the total 15 week circulation for the months of September, October and November, and as 3/15 for December. Because $x^2 = 8.93$ it was possible to say that the differences between monthly circulations were significant but not that this was the result of putting books on display. Total circulation appeared to be significantly higher in October but dropped in November. The contrast between lower total library circulation for November and higher circulation for Nov. display books supports further the effectiveness of the display for promoting circulation.

A third source of data was the questionnaires which went out with display books. The return rates for the questionnaires were 64% for the Oct. books and 73% for the Nov. books.

Both of these were low especially since the actual numbers were small as seen in Table 5.

Table 5

A Comparison Between the Number of Display Books Which Circulated and the Number of Questionnaires Returned

Book Group	Circulation for Display Books	# of Questionnaire Returned	% Return Rate
Oct. Fiction	6	6	100%
Oct. Non-fiction	5	1	20%
Total Oct.	11	7	64%
Nov. Fiction	11	6	55%
Nov. Non-fiction	19	16	84%
Total Nov.	30	22	73%

Given the low response rate for readers of October non-fiction and November fiction titles, it is difficult to state that the data from the questionnaires was representative of all who read display books. Questionnaire results should be considered tentative at best.

The total number of questionnaires returned during the two experimental periods was 29. Only 1 was completed by a boy and all were from either third or fourth grade students. All except 1 student read the books they chose , all stated that they liked the books and 1 student said she would not pick this kind of book again. Twenty-seven considered their

choices to be different from what they usually read. Table 6 tabulates this data from the structured questions of the questionnaire.

Table 6

Data from the Structured Questions of the Questionnaire

Questions	Oct. Fiction	Oct. Non-fiction	Nov. Fiction	Nov. Non-fiction
gender:				
boys	0	1	0	0
girls	6	0	6	16
grade level:				
third	0	1	1	11
fourth	6	0	5	5
read:				
yes	6	1	6	15
no	0	0	0	1
liked:				
yes	6	1	6	16
no	0	0	0	0
different:				
yes	5	1	5	16
no	1	0	1	0
pick again:				
yes	6	1	5	16
no	0	0	1	0

A logical source of questionnaire data to be used as a comparison to display questionnaire data, would have been

data from questionnaires obtained from the sample books in their normal positions during the experimental phases and acting as controls to the sample books on display. There could have been questionnaires in the Nov. books when the Oct. books were on display and vice versa. This was not done and even if it had been there would not have been enough data to make this information useful as the circulation for the control books was very low as was illustrated in Table 2. Since the field test questionnaires were completed on books taken out by students from the entire collection, it was decided that though this information could not be used to test causal hypotheses, it could be used to make comparisons between answers given on the field test questionnaires and answers given on the display questionnaires. This decision was made on the assumption that the books chosen and used for the field test represented normal borrowing practices. It was recognized however, that differences could not be viewed strictly as a result of the display, given the pre-experimental nature of the design used for this particular comparison.

The questionnaires were field tested with two classes. One was a third grade class of 22 students with 18 boys and the other was a fourth grade class of 25 students with 17 girls. It was decided that since the majority of display questionnaires had been filled out by third and fourth grade girls, only the data on the field test questionnaires from the third and fourth grade girls would be used for comparison purposes. This would make the two groups more equivalent in

both size, (29 & 21), and composition.

The results of the field tests have been tabulated in Table 7.

Table 7

Data from the Structured Questions of the Field Test Questionnaires

Questions	Grade 3 (22 students) boys N=18	girls N=4	Grade 4 (25 students) boys N=8	girls N=17	Total (47) boys N=26	girls N=21
read:						
yes	15	4	6	12	21	16
no	3	0	1	5	4	5
liked:						
yes	18	4	8	17	26	21
no	0	0	0	0	0	0
different:						
yes	6	1	3	8	9	9
no	11	3	5	9	16	12
pick again:						
yes	14	3	7	16	21	19
no	3	0	1	1	4	1

A very few questions were not answered thus changing some totals.

Generally speaking the books were read, liked and would "be picked again" in both the display questionnaires and the field test questionnaires so these statistics were considered to be insignificant to the purpose of this study. The responses to the question "this is a different kind of book" and to the open-ended question were not uniform between the two types of

questionnaires so these have been addressed in separate tables with data from the display questionnaires being compared to data from the field test questionnaires. Table 8 illustrates the question: e. This is a different kind of book than I usually read. yes no

Table 8

A Comparison Between Books from a Display or from the Collection by: if Perceived as Different

Question:	Question asked about books from display N=29 Observed	Expected	Field Question asked about books from collection N=21 Observed	Expected
Considered Different	27	20.88	9	15.12
Considered Not Different	2	8.12	12	5.88

x^2=12.86 df=1 P=.05

The chi square formula $x^2 = \Sigma$((ABSO(O-E)-.5)**2/E) was used to test for significance where O is the observed frequency of the selection of "yes" or "no" to the question; E is the expected frequency of selection obtained by determining what percentage of the total number of questionnaires tested (29 + 21=50) each amount was (N=29 for display, N=21 for field) and multiplying this by the total number of responses (yes or no) in either category "considered different" (36) or "considered not different" (14). The .5 is a Yates correction for a 2x2 contingency table where the expected number of occurrences is more than 5 and the total number of actual occurrences is 50 or more. The correction decreases observed

values by .5 where O > E and increases observed values by .5 where O < E.[16]

When this question was asked of students choosing books taken from a display, 27 considered the books to be different from what they usually read and 2 did not. When it was asked of students choosing books from the collection, 9 considered the books different and 12 did not. The chi square test for significance indicated that the difference was significant.

The open-ended question asked students why they picked the books they did. Again it was interesting to compare the answers given on the display questionnaires to the answers given on the field test questionnaires as the books may be chosen for different reasons. The students were to put down their reasons in their own words but because their answers were short and simple it was not difficult to put the answers into seven categories which have been defined below.

Prior knowledge: included books which had been read before, been made famous by winning an award, by having a movie made of it or by being about a well known character like Garfield. These were chosen for their title rather than the author.

Type: included books which were on a certain subject the reader was interested in and often chose, or a genre of fiction or member of a series that was often chosen by the reader.

Recommended: included books recommended by a friend.

Author: included books which were chosen because the reader had read and enjoyed other books by that author.

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[16]Colin O'Muircheartaigh & David Pitt Francis, Statistics : A Dictionary of Terms and Ideas, (Arrow Books, 1981), 286.

Computer: included books which had been specifically searched for using the computer catalog either by author, title or subject.

Safe: these have been collapsed into "safe" reasons. If someone else has enjoyed reading the book or if the reader has previously enjoyed books about the character, the subject or by the author, the chances are good that this book will be enjoyed as well, making it a "safe" choice.

Looks: included books which were picked because the student looked at the cover, the title or the content and decided it would be an interesting book to read. It included responses like looked "good", "interesting", "funny" and "scary". The cover art, title or subject matter sparked the person's curiosity. It is possible that the book will not meet expectations. The comparisons for the question are in Table 9.

Table 9

A Comparison of Data from Display Questionnaires and Data from Field Test Questionnaires by Reasons Given for Why Books Were Chosen

Reasons in Categories	Books Chosen from Displays N=29	%	Books Chosen for Field Test from Collection N=21	%
prior knowledge	0	-	4	19%
type	6	21%	9	43%
recommended	1	4%	2	9.5%
author	0	-	2	9.5%
computer	0	-	1	5%
"safe reasons"	7	24%	18	86%
looks	22	76%	3	14%

When the data for books from the display questionnaires were compared with data for books from the field test questionnaires, only 24% of the display books were taken out for "safe" reasons but 86% of the field test books were taken out for these reasons--a difference of 62%. Display books were taken out for 76% of the times because they "looked good or interesting" while only 14% of the field test books were taken out for this reason.

Before the study began the widths of the books and the dates of publication had been recorded in case these characteristics would affect the circulation of some books over others. The circulation for all sample books was too low to make valid comparisons.

Discussion of Results

Hypothesis I stated that children's books on display would be chosen more often than comparable books on the shelves in a school media center. The circulation of display books was disappointingly low especially in October, the first experimental period. This may have been a result of the students being unaccustomed to theme displays in the media center. Though the display was in a location highly visible upon entrance to the center, it was not a normal situation from which to choose books. Circulation did improve in November and it could be argued that the books for this display were the kind more readily chosen by students than

the books in the October display. The circulation for the Oct. books was higher in both the pre and post experimental periods then for the Nov. books. which seemed to indicate that the books in the Oct. group normally experienced a higher circulation. A more plausible reason is that students were more aware of the possibility of taking books from a display during the second experimental period and so putting books in a display promoted their circulation even though Nov. books normally circulated less.

Hypothesis I was supported since the differences in circulation between books on display and books not on display was significant for both periods. It is possible to say that children's books on display may be chosen more often than comparable books on the shelves in a school media center.

A further support of this hypothesis is the reason why books were chosen. Does taking books from off the shelves and putting them into a display make them more convenient to pick up or does it draw the selector's attention to books they may not have found on the shelves? With 17,000 books to choose from and only the spines showing; and with limited time to choose the books, as is usually the case in a school media center, the process for selecting books becomes an interesting question. The data from the field test was assumed to be representative of normal borrowing practices and 86% of the reasons for choosing books were "safe" reasons--some indication and/or assurance that because of familiarity with the author, subject, title, characters etc., this book would

be enjoyed. On the other hand, 76% of the display books were chosen because the selector thought the book looked good, interesting, funny or scary. The selector was taking a chance that the book would be enjoyed by selecting it on the basis of its appearance. This would indicate that a display can be a tool to acquaint patrons with books which have become "lost" in the collection thereby increasing their circulation.

Hypothesis II stated that a display would cause an increase in the overall circulation of children's books in a school media center. A chi square of 8.93 might appear to indicate that this occurred but several factors must be considered. The total circulation included students and teachers taking out materials. Twenty-six teachers taking out books for a literature based curriculum can amount to a great quantity of books taken out at irregular intervals. The circulation of display books was very low and only involved two grade levels out of a possibility of five. The total circulation was highest for October whereas the sample circulation was highest for November. If displays were affecting total circulation, there should have been some correlation between the two circulation statistics. For these reasons it is not possible to say that the display caused an increase in the overall circulation. Hypothesis II is therefore not supported.

A further objective of the study was to explore the possibility of using a display to encourage children to select books which were different from the type they normally

selected. The data from both the display questionnaires and the field test questionnaires were used to answer this question. The question was "This is a different kind of book than I usually read". That the students were able to distinguish between books that "are different" and books that are similar whether it is be genre, content, subject or format; could be questioned, but the data from the field test and the display questionnaires seemed to indicate that they could. The majority of responses to the questions of having liked the book and the possibility of picking it again were yes. This could mean that students gave a yes answer because this was indeed the case, because they were not capable of making these decisions or because they believe they are expected to like the books they choose. The question about books being different received both "yes" and "no" with 9 out of 21 considering the books chosen from the display as being different and 27 out of 29 considering the books chosen from the display as being different. It would appear at least for third and fourth grade girls that books selected from a display were more frequently perceived as different when compared to books typically selected from the entire collection.

Conclusion

Setting up a theme display can be time and resource consuming and so requires some justification for the school media specialist who often has limited time and resources. A display can add to the physical attractiveness of the media center but it should have a practical and an educational

basis as well. The writers cited in the introduction of this paper stated that a display is an excellent way to bring readers into the library, to encourage reading and to broaden students' interests and concepts. There is no indication from this study that a display brought students into the library or increased total reading. There is evidence though that a display can encourage students to choose books which have had poor circulation but are still good books to read and that a display can encourage students to choose books that are different thus broadening their interests and concepts. A practical application for the media specialist is that this may be one way to acquaint students with books in the collection which are being overlooked or aid in the decision to weed books which do not circulate, even after being displayed.

If this study were duplicated, the researcher would make some recommendations. The many variables in a study of this sort would be easier to control if the researcher is a staff member of the media center. Even if the books are chosen to fit into a theme, more emphasis on randomness and equivalency of the sample books would add strength to the reliability and validity of the results. Again this would be easier to attain if the researcher worked with the collection on a regular basis. It was thought that the novelty of a display would increase its appeal but it may be necessary to acquaint students with the concept of using displays for book selection before one is used in a study of this sort.

This study raised questions which could lead to further research. Once the novelty of the display disappears, will displayed books continue to circulate more? Why did more girls complete questionnaires and were they the only ones taking books from the display? Why were none of these students from the fifth grade? Would different promotional techniques be more successful with older readers and/or boys.

All previous studies have been done with adult collections and therefore largely adult populations. Can we apply conclusions drawn from these studies to the borrowing habits of children? This study suggests we can. The relatively low circulation does suggest, however, that it may be necessary to discover and/or implement other methods for marketing reading and books as well as book displays.

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Appendix A

The Library Display
A Selective, Annotated Bibliography

Beehler, S. A. and M. Childers. Winter, 1986. "One step beyond : Creating a current awareness exhibit". R.Q. 27

An interesting paper giving a step by step description of setting up a display which combines a library collection with information from outside thus establishing the libraries' role as a vital information source.

Borgwandt, S. 1961. Library display Johannesburg : Witwatersrand University Press.

Along with a discussion of the importance of displays there is a useful list of principles to guide the creation of a display in a library.

Edsall, M. S. 1984. Practical P.R. for school library media centers. New York : Neal-Schuman Publishers, Inc.

Along with much other practical advice for school media specialists, there is a chapter on creating displays for today's sophisticated children.

Franklin, L. C. 1980. Library display ideas. Jefferson, NC : McFarland & Co.

An excellent source for ideas for both school and public libraries. The book contains ordering information from good sources of materials. The ideas cover a wide range of themes and the claim is that the displays can be made in an hour.

Garvey, M. 1969. Library displays : Their purpose, construction and use. New York : H. W. Wilson Co.

A good source of ideas and design principles for those wishing to set up displays with backgrounds or for designing directional messages. Some of the ideas are dated.

Mallet, J. J. 1984. Library bulletin boards and displays kit. West Nyack, NY : The Center for Applied Research in Education, Inc.

Over 75 easy-to-make bulletin boards and displays to serve the purposes of expanding children's reading interests and teaching functional library skills; with materials and directions.

Appendix B

Questionnaire

Please do not put your name on here.

Title of book _____

1. Please circle the right answer.

a. I am a

b. I am in grade 2 3 4 5

c. I read most or all of this book. yes no

d. I liked this book ☺ yes no

e. This is a different kind of book than I usually read. yes no

f. I would pick this kind of book again ☺ yes no

2. Why did you pick this book? _____ ?

_____

_____

_____

Thank-you. When you return the book, please put this in the box on the desk and you may choose a sticker.